REMARKS

By this Amendment, claims 30, 31 and 34 have been amended, and withdrawn claims 1-18 have been canceled. Accordingly, claims 28-34 are pending in the present application.

Applicant wishes to thank the Examiner for the indication of allowable subject matter in claims 30, 31 and 34. In response, each of claims 30, 31 and 34 have been rewritten in independent form so as to include all of the limitations of the base claim and any intervening claims. These amendments to claims 30, 31 and 34 do not narrow the scope of these claims from those originally presented. Accordingly, indication of allowance of claims 30, 31 and 34 is respectfully requested.

Claims 28, 29, 32 and 33 stand rejected under 35 USC §102(b) as being anticipated by Gaynes et al. (US Patent 5,542,602). Applicant respectfully traverses this rejection.

Among limitations of independent claim 28 which are neither disclosed nor suggested in the prior art of record is a bonded structure which includes "a first low-melting-point material formed on the first electrode" and "an organic binder formed on the first low-melting-point material", wherein the organic binder includes a conductive filler and "at least a part of the conductive filler is present within the first low-melting-point material".

One of the important features resulting from the claimed structure and the relationship between the low-melting-point material and the conductive filler is that the connection between the low-melting-point material and the organic binder is strengthened by including the conductive filler therein. In addition, since the conductive filler contained in the organic binder is also present within the low-melting-point material on the electrode,

the contact area between the low-melting-point material and the conductor filler is increased. As a result, not only is the bonding strength enhanced, but conduction resistance is decreased.

Unlike the present invention, Gaynes et al. is merely directed to a transient liquid phase (TLP) reaction at a low temperature. Gaynes et al. fails to recognize the relationship between the low-melting-point material and the conductive filler, and also fails to teach that a connection between the low-melting-point material and the organic binder is strengthened by including the conductive filler therein.

Specifically, Gaynes et al. is directed to an eutectic alloy system wherein an alloy region is formed when heat is applied. As specifically pointed out at column 5, lines 48-65 of Gaynes et al, "the coating material [on the raised pads] is depleted in the region immediately surrounding the S-rich alloy." Since an S-rich alloy is formed and no coating material remains in that location, the conductive particles can not possibly be present within the coating material in the resulting structure.

Therefore, there is nothing within Gaynes et al. which teaches, or even remotely suggests, that a conductive filler within an organic binder is present within a low-melting-point material formed on a surface of an electrode, as required by independent claim 28. Accordingly, it is respectfully submitted that independent claim 28 patentably distinguishes over the art of record.

Claims 29, 32 and 33 depend either directly or indirectly from independent claim 28 and include all the limitations found therein. Each of these dependent claims include additional limitations which, in combination with the limitations of the claims from which they depend, are neither disclosed nor suggested in the prior art of record. Accordingly, claims 29, 32 and 33 are likewise patentable.

In view of the foregoing, favorable consideration of the amendments to claims 30, 31 and 34, and allowance of the present application with claims 28-34 is respectfully and earnestly solicited.

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Respectfully submitted,

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